

**GOVERNMENT OF INDIA
MINISTRY OF POWER**

**LOK SABHA
UNSTARRED QUESTION NO.2994
ANSWERED ON 07.08.2025**

CONTRIBUTION OF CCUS IN CARBON REDUCTION

2994. DR. SHASHI THAROOR:

**Will the Minister of POWER
be pleased to state:**

- (a) the number and distribution of currently operational Carbon Capture Utilisation and Storage (CCUS) projects across key industries;**
- (b) whether these projects have contributed to carbon reduction and if so, the details of the estimated target of carbon reduction achieved (in MT CO₂ equivalent) through these projects; and**
- (c) the projections for CCUS's contribution to sustainable development and Atmanirbhar Bharat in terms of economic impact and job creation?**

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) & (b): Carbon Capture Utilisation and Storage (CCUS) technologies are presently in nascent and development stage in the country. Some industries have taken initiatives for pilot or demonstration projects which are currently operational and the details are given below:

- (i) NTPC Ltd. has recently commissioned a pilot project of 10 Metric Tonnes Per Day (TPD) Carbon Dioxide (CO₂)-to-Methanol conversion plant at NTPC Vindhyachal, Madhya Pradesh, with annual capacity of 6,000 Metric Tonnes (MT).**
- (ii) M/s Tuticorin Alkali Chemicals and Fertilizers Limited (TAFL), Tamil Nadu has set up CCUS facility with a capacity to capture up to 60,000 MT of CO₂ annually.**
- (iii) M/s JSW Steel operates a Direct Reduced Iron (DRI) unit plant at Salav, Maharashtra where CO₂ capture is deployed in line to strip out CO₂ from the process gas, of capacity of upto 500 TPD.**

In addition, Department of Science and Technology (DST) and Council of Scientific & Industrial Research (CSIR) have also taken up various projects, either on Research and Development (R&D) scale or pilot scale, for validating and deploying Carbon Capturing and Utilisation (CCU) technologies at small scale in real industrial setting through Industry-Academia collaborations.

(c) : CCUS is expected to play a transformative role in enabling industrial decarbonisation in the country, aligning with the nation's overarching goal of achieving 'Net Zero' by 2070. By promoting indigenous Research and Development (R&D), CCUS reduces dependence on imported technologies. The integration of CCUS technologies may contribute to the development of a circular carbon economy, wherein captured carbon dioxide is repurposed into value-added products such as synthetic fuels, fertilizers, construction materials, and industrial gases. This approach not only promotes resource efficiency but also aligns with the broader objectives of Atmanirbhar Bharat, by encouraging indigenous innovation.

The deployment of CCUS technology across sectors, hard-to-abate sector, such as cement, power, and chemicals etc. is expected to encourage investment, foster innovation, and potentially support job creation in high-skilled domains. Public-private partnerships and innovation-driven funding models are the key to accelerate implementation of CCUS in the country.
